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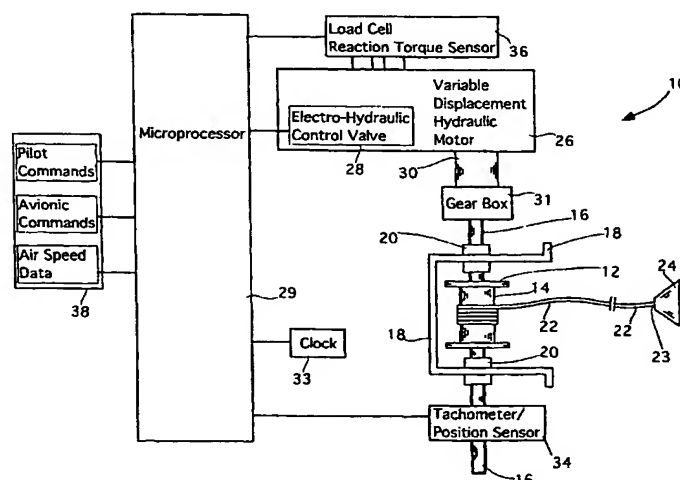
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Published:  
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: APPARATUS AND METHOD FOR CONTROLLING AERIAL REFUELING HOSE



(57) Abstract: The invention is a variable displacement hydraulic motor-controlled hose reel drive system (10) for aerial refueling of a receiver aircraft from a tanker aircraft. The system includes a variable displacement hydraulic motor (26), a tachometer (34), position sensor (34), a reaction torque sensor (36) and a microprocessor (29) which, depending upon data received from the system's position and reaction torque sensors, sends appropriate signals to the motor. The invention is also a method for deploying a hose and drogue so as to reduce the likelihood that the hose (22) would go into oscillation after initial engagement of a receiver aircraft's probe with the drogue (24). In an embodiment of the invention, the hose (22) is retracted prior to hook up of the probe and drogue (24), and the force required to retract the hose (22) is recorded. After initial engagement of the probe with the drogue (24), the hose (22) is retracted until the force required to retract the hose rises to about the same force previously recorded.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/24554

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : B64D 37/00

US CL : 244/135A

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 244/135A

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	U.S. 4,187,962 A (Henry) 02 February 1980 (12.02.1980), Figure 1	1-32
A	U.S. 4,150,803 A (Fernandez) 24 April 1979 (24.04.1979), Figure 1	1-32
A	U.S. 4,533,097 A (Aldrich) 06 August 1985 (06.08.1985), Figure 1	1-32
A	U.S. 5,141,178 A (Alden et al) 25 August 1992 (25.08.92), Figure 1	1-32



Further documents are listed in the continuation of Box C.



See patent family annex.

\* Special categories of cited documents:

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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**INTERNATIONAL SEARCH REPORT**

PCT/US02/24554

**Continuation of Item 4 of the first sheet:**

The applicant's title is too long.

New Title: Apparatus and Method for controlling Aerial Refueling Hose